

General descriptions - Large Scale projects

Name	Sector	Location	Coordinator	Description
Ageli Alsace Géothermie Lithium	Manufacturing of components for energy storage	France	ERAMET SA	- The Ageli project will establish the first industrial geothermal Direct Lithium Extraction (DLE) plant in France. It will produce up to 15,000 t/year of battery-grade lithium carbonate. It will integrate geothermal heat and electricity production with lithium extraction and refining. - The plant will produce enough lithium to meet roughly 10 % of the EU’s stationary energy storage needs, thus reducing dependence on imported lithium and stimulating regional industry.
ASTOR ATLAS STORAGE	Other	Norway	Aker BP ASA	- The ASTOR project aims to create a direct offshore CO₂ off-loading and permanent geological storage infrastructure in the Norwegian Sea - ASTOR will replace conventional on-shore terminals and offshore platforms with a direct ship-to-subsea CO₂ transfer system and uses modular subsea infrastructure and a standardised vessel concept. - ASTOR will unlock cross-border decarbonisation for large clusters and smaller emitters, offer a scalable, flexible and cost-effective storage solution and contribute to the European CCS market.
BELair BELair - Biomass & Electrolysis for a cleaner air	Refineries	France	T.H2	- The BELair project will deploy a first integrated commercial-scale Power-and-Biomass-to-Liquid (PBtL) plant to produce renewable fuels of non-biological origin (RFNBO) such as e-Sustainable Aviation Fuel (e-SAF) and bio-SAF in Caen, Normandy region, France. - The project innovation lies in an entrained-flow biomass gasification combined with Fischer-Tropsch reactor modules and an in-house upgrading train, using electrolytic hydrogen to triple fuel yield per tonne of biomass. - The modular, flexible design provides a replicable mid-scale model, delivering up to 13 kt of low-carbon fuels annually, including approximately 6,000 t of advanced bio-SAF, 4,400 t of RFNBO-compliant e-SAF, and 2,600 t of renewable naphtha and offers a scalable, resource-efficient and resilient pathway to decarbonisation.
CAROLUS Certified All electric Regional aircraft: Operational Line Upscaling & Serialisation	Aviation	Germany	Vaeridion GmbH	- The CAROLUS project will develop first-of-its kind fully battery-electric 9-seater aircraft, with a 400km range, from development to CS-23 certified industrial production and commercial operation at the Oberpfaffenhofen airport located southwest of Munich, Germany. - The main innovation of the project lies in a proprietary multi-engine, single-propeller electric propulsion system combined with a modular wing-integrated battery pack (60 high-voltage units), delivering low mechanical complexity, built-in redundancy and scalable certification. - The project will avoid around 5 million tonnes of CO₂ emissions its first ten years of operations, eliminate non-CO₂ operational emissions lowers primary energy demand and operating costs, reduces dependence on fossil fuel imports.
CIRCUS Circular Industrial Recycling of Complex Plastics into Upcycled Petrochemical Streams	Chemicals	Spain	Greenertis Tarragona S.L.U.	- The CIRCUS project aims to convert mixed plastic waste into high-grade pyrolysis oil, suitable for steam cracking and new polymer production in Tarragona, Spain. - The project is designed to deploy an innovative pyrolysis technology that combines a molten-salt thermal reactor and an electrified reactor, to convert polyolefin rich plastic waste into high grade pyrolysis oil. - The CIRCUS project creates a circular feedstock production platform for advanced chemical recycling of complex plastic and aims to replace fossil naphta as feedstock, avoiding waste landfilling or incineration, leading to around 1,5 million tonnes of CO₂ in emissions avoidance its first ten years of operation.
ECO2FLY DECARBONISING THE AVIATION AND CEMENT INDUSTRIES THROUGH THE FIRST CCUS VALUE CHAIN FOR E-SAF PRODUCTION IN EUROPE	Refineries	Spain	Eco2fly Power S.L.	- ECO2FLY project aims to establish a fully integrated CCUS value chain for synthetic Sustainable Aviation Fuel (eSAF) production, by capturing CO₂ from a cement plant, and converting part of the captured CO₂ into SAF via a Methanol-to-Jet (MtJ) pathway using integrated production of renewable hydrogen, the rest of the captured CO₂ will be transported by rail to a permanent geological storage site in Spain. - The proposed innovative system integrates in a single industrial location CO₂ capture, RFNBO hydrogen production, water recycling, waste heat recovery and an advanced energy management system. The retrofitted hub will increase CO₂ capture through oxygen enrichment and adsorption-assisted cryogenic separation.

				The project will boost EU fuel autonomy, lower aviation emissions and demonstrate a replicable blueprint for cross-sector decarbonisation, supporting Europe’s Green Deal, climate targets and industrial competitiveness. It plans to supply about 50 % of Spain’s demand for eSAF in 2032
EFR eFuels Rotterdam (EFR): Large-Scale e-SAF Production in Rotterdam, NL	Refineries	Netherlands	eFuels Rotterdam B.V.	- The project EFR aims to design, construct and operate Methanol-to-Jet (MtJ) electro sustainable aviation fuel (e-SAF) production facility producing approximately 280,000 tonnes per year of e-SAF by using externally sourced and imported e-methanol. The plant will be located in the Port of Rotterdam, the Netherlands. - This first-of-a-kind world-scale facility will produce e-SAF by combining imported renewable methanol, biogenic carbon as feedstock and locally produced renewable hydrogen. - The project location will facilitate direct access to European airports, including Amsterdam Airport Schiphol, making it a key hub for the distribution of sustainable aviation fuels and e-fuels in the EU.
Gravithy Fos-sur-Mer Construction and operation of a 2Mt/year low-emissions Hot Briquetted Iron plant (HBI), in order to decarbonise the steel value chain	Iron & Steel	France	Gravithy	- The Gravithy project will construct and operate a first-of-a-kind industrial facility producing a 2 Mt/year of Hot Briquetted Iron (HBI) in Fos-sur-Mer, France. - The project’s innovation lies in using low-carbon hydrogen produced on-site to produce the low-carbon HBI, an intermediary to low-carbon steel. - The project will provide a replicable model for the decarbonisation of the EU steel sector. By enabling deep emission reductions in one of the EU’s most hard-to-abate sectors, the project strengthens the European industrial decarbonisation strategy, leadership, and resilience, supporting the transition to a more sustainable European steel industry.
H4 Marseille Fos H4 Marseille Fos: the first fully integrated multi-flux e-SAF industrial platform at European level	Refineries	France	H4 Marseille Fos	- H4 Marseille Fos aims to build an integrated e-SAF value chain in the Marseille-Fos industrial port area, in France, to produce up to 75,000 tonnes of synthetic aviation fuel annually from low-carbon hydrogen, e-methanol and captured CO2. - The project will deploy high-performance electrolysis, e-methanol synthesis enabled by multimodal CO2 logistics, and a high-selectivity Methanol-to-Jet process designed to maximise e-SAF yields across a fully integrated production chain. - By supporting aviation decarbonisation, the project is expected to avoid more than 96% of greenhouse gas emissions, create 165 direct jobs, strengthen European clean technology value chains, and support energy sovereignty.
L Ardoise First-of-a-Kind Dual-Output Power-to-Liquid Facility with SOEC electrolysis for Two Hard-to-Abate Sectors: Maritime and Aviation	Refineries	France	MGH Energy	- The L’Ardoise project will build and operate a first-of-a-kind integrated Power-to-Liquid facility producing 70 kt/year of e-kerosene for the aviation sector and 40 kt/year of e-methanol for the maritime sector, located in Laudun-L’Ardoise, France. - The core innovation of the project is a dual-output methanol-based architecture that couples a mature hybrid alkaline technology with a Solid Oxide Electrolysis (SOEC) unit, enabling flexible allocation between aviation and maritime fuels within a single industrial system. - The project will contribute to avoiding more than 3 million tonnes of CO2 emissions its first 10 years of operation, provide a replicable model for a European e-fuels production contributing to the European e-fuels market, create 200 permanent jobs, and revitalise a former industrial site.
Mosusol-netCO2 Molins Sustainability Solutions for Advancing net-CO2 Cement Production	Cement & lime	Spain	CEMENTOS MOLINS INDUSTRIAL, S.A.	- The Mosusol-netCO2 project will deploy one of Southern Europe’s first full-scale carbon capture and storage (CCS) value chains, at Molins’ cement plant in Spain, capturing around 97 % of the emissions from the production of Portland clinker and calcium aluminate clinker. - The project pioneers an integrated oxy-fuel combustion process combined with an air-separation unit and a cryogenic multi-feed CO2 processing unit, together with a dedicated 100 km pipeline to deliver high-purity CO2 for permanent geological storage in Tarragona. - By avoiding up to 1.1 MtCO2 annually, the project will create a cost-effective, regional CCS chain, reduce fossil-fuel use and support Europe’s net-zero industrial strategy.

Ravenna CCS Phase 2 First-of-a-kind Mediterranean integrated CCS Hub, enabling multimodal CO ₂ import and permanent storage in multiple depleted gas reservoirs, managed centrally as a single complex.	Other	Italy	ENI SPA	• The project will deploy one of the largest, fully integrated, multimodal and open access CO2 storage and hub infrastructure in southern Europe, capable of safely storing up to 4Mt of CO2 per year. • The project pioneers an integrated, multimodal CO₂ handling system able to receive liquefied CO₂ by ship, rail and road, coupled with a gaseous on-shore and offshore pipeline network and a multi-reservoir storage infrastructure. • The project will connect northern Italian industrial clusters to geological storage, will provide a cost-effective business solution to several emitters EU-wide and will strengthen European industrial competitiveness.
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ACE Anaerobic Chain Elongation Biorefinery	Chemicals	Netherland	ChainCraft Holding BV	- Project ACE aims to build, in The Netherland, a first-of-kind industrial biorefinery producing low-carbon fatty acids from secondary agricultural biomass, replacing fossil-based and palm oil-derived chemical inputs with circular, locally sourced residues from the agri-food industry. - It will apply a biological production route that combines anaerobic chain elongation, downstream purification and full nutrient recovery to convert unavoidable food-processing residues into drop-in chemicals at industrial scale. - The project can reduce reliance on imported and deforestation-linked feedstocks and strengthen Europe's industrial competitiveness by creating a near-zero-waste, circular model for hard-to-abate chemical value chains.
BESS-4-C Battery Energy Storage Solution for Congestion Management	Intra-day electricity storage	France	EDF RENOUVELABLES	- The BESS-4-C project is an innovative battery storage project in Perquie (France) that aims to provide location-specific congestion management for the electricity grid, absorbing excess solar electricity generation and easing local grid bottlenecks. - The project pioneers an experimental zonal tender and a contractual framework that allows a privately-operated battery to provide grid flexibility in an area subject to electricity congestion, while operating commercially outside of periods of grid stress. - BESS 4 C provides a practical, investable model for both system and battery operators, aligning system requirements with commercial viability, bolstering grid resilience in constrained electricity networks across Europe, and thereby laying the groundwork for widespread replication and scaling throughout the continent.
BEYOND FOAK large-scale introduction of a new generation of advanced natural polymer-based materials that go BEYOND bioplastics	Chemicals	Germany	TRACELESS MATERIALS GMBH	- BEYOND will design, construct and commission a first-of-a-kind industrial-scale plant in Hamburg to produce thermoplastic-like biomaterials from agricultural residues as a drop-in replacement for conventional plastics. - The project aims to use Traceless' patented process to produce natural polymer-based materials at scale. In doing so, it will deliver a cost-efficient production route that eliminates fossil-derived feedstocks and hazardous additives while being compliant with regulation. - The project will avoid 1.95 million tonnes of CO₂ emissions in the first 10 years of operation, create high-skill jobs, stimulate a green bio-economy, and protect ecosystems by preventing plastic and micro-plastic pollution across Europe.
BioNEXUS Integrated Biogas Plant with Hybrid Biological Methanation for Biomethane and e-Methane Production	Refineries	Denmark	Haderslev Bioenergi A/S	- The BioNEXUS project will build and operate a first-of-a-kind biogas and Power-to-Methane facility that combines anaerobic digestion of organic residues with hybrid biological methanation to produce renewable methane for the gas grid, in Denmark. - The project will integrate in-situ and ex-situ biological methanation processes, using renewable-hydrogen from electrolysis to convert biogenic CO₂ from raw biogas into extra methane, boosting methane yield per tonne of feedstock by roughly 50%. - By delivering grid-quality biomethane and e-methane, BioNEXUS will cut fossil-gas use, lower greenhouse-gas emissions, improve waste-valorisation and support Europe's renewable electricity integration and energy security.
Calypso Carbon Avoidance through Low-pressure cryogenic Yield for glass Process emissions StOrage	Glass, ceramics & construction material	Belgium	AGC GLASS EUROPE SA	- The CALYPSO project aims to deploy an industrial-scale Cryogenic Carbon Capture (CCC) system at AGC Glass Europe's glass manufacturing facility in Belgium. - The project will capture around 125,000 t of CO₂ per year, removing 95 % of furnace emissions and avoiding 1.2 Mt CO₂e over ten years of operation. The project integrates advanced carbon capture technology and makes use of nearby shared CO₂ transport and storage infrastructure. - By delivering significant emission reductions of greenhouse gasses, Sulphur Oxides, Nitrogen Oxides and particulates, the CALYPSO project aims to strengthen European industry competitiveness, create a replicable blueprint for other hard-to-abate sectors and support low-carbon supply chains within the construction and automotive sectors.
eCH4-COMPETE PuraVolta® - Low-cost biogenic e-methane production	Refineries	Denmark	Nysted CCUS Aps	- The eCH4-COMPETE project will scale up the production of e-methane to a commercial level, while contributing to the balancing of the electricity grid in Denmark, by producing e-methane when electricity prices are low and liquefy and store CO₂ when prices are high. - The project innovation is to integrate mixed-culture biological

				methanation with a flexible electrolyser technology and an advanced system design, enabling flexible production approach of renewable fuels of non-biological origin (RFNBO). • The project will reduce over 270,000 tonnes of CO2 emissions over ten years of operation and contribute to Europe’s competitiveness within e-fuels.
GAFF Green Ammonia Fueled Fleet	Maritime	Italy	Færder Tankers Norway AS	• The GAFF project will deploy the first European fleet of medium gas carriers equipped with tri-fuelled propulsion system. Developed by Færder Tankers in Norway, the ships will transport green ammonia providing ship-to-ship bunkering on transcontinental routes between India, the US Gulf Coast and Northwest Europe. • The project’s main innovation is the first-of-a-kind tri-fuel engine that can run on ammonia, LPG and marine gas oil, as well as the integrated green ammonia transport and ship-to-ship bunkering platform, addressing a critical bottleneck in the uptake of ammonia as a marine fuel. • The GAFF project fleet will transport up to one megatonne of green ammonia per year, serve as mobile bunkering units, and avoid more than 1.2 million tonnes CO2e over ten years, and contribute to maritime competitiveness.
Musel GreenMet Musel GreenMet-First-of-a-kind commercial scale system-integrated hybrid renewable methanol plant	Refineries	Spain	HYMET MUSEL S.L.U.	• The Musel GreenMet project aims to build an e-methanol and biomethanol co-production plant in the Port of El Musel (Spain), made from imported green hydrogen, liquefied CO2 and biomethane. The plant will be fully integrated with the Asturias Hydrogen Valley, regional biogenic CO2 sources and the existing port and energy infrastructure. • The core innovation of the project lies in the integration of two production pathways: e-methanol from renewable hydrogen and CO2, and bio-methanol from bio-syngas generated via electrified biomethane reforming. • By demonstrating a scalable, flexible and cost-efficient renewable methanol production model and supplying low-carbon methanol for maritime, aviation and chemical industries, the plant will support the decarbonisation of hard-to-abate sectors in the EU.,
OASIS Off-grid Anaerobic digestion in a Sustainable & Innovative energy System	Other	Netherlands	Groen Gas Waalwijk	• The OASIS project is a first-of-a-kind, fully electrified, off-grid biomethane solution, that enables biomethane production in grid-constrained regions where conventional projects would otherwise be unfeasible. The project will be developed in Waalwijk, the Netherlands. • The project pioneers a commercial-scale system that integrates advanced anaerobic digestion, high-efficiency biogas upgrading, solid oxide fuel cell (SOFC)-based power generation, and bio-CO2 liquification, utilisation and storage in one single system. • The project will be Europe’s largest off-grid biomethane plant and will avoid 246,000 tonnes of CO2 emissions over ten years. With high technical and operational maturity, and strong replication potential, the project contributes to EU climate targets, energy security and industrial decarbonisation.
ORION industrial Electrification of Calcined Clay Production for Clinker Substitution in the EU Cement Industry	Cement & Lime	Greece	HERACLES GENERAL CEMENT CO	• ORION project aims to integrate a fully electrified calcined-clay production line into an existing cement plant in Greece, delivering over 150,000 tonnes per year of high-quality calcined clay, as clinker substitute. • The project combines high-temperature electrified calcination process to produce low-carbon calcined clay with a hybrid renewable electricity system including PV and BESS to ensure stable operations. • The ORION project substitutes clinkers with calcinated clay by 50%, enhancing the cement plant’s decarbonisation and competitiveness, and provides a replicable low-carbon solution for the European cement sector and other energy-intensive industries.
Phantom Phantom	Hydrogen	Netherlands	HYDROGEN ONSITE, SL	• The Phantom project will construct and operate an ammonia to-hydrogen cracking facility in the port of Rotterdam, employing the applicant’s proprietary integrated membrane reactor cracking technology to produce 20 tonnes of low-carbon hydrogen per day. • The main innovation of the project lies in an integrated Pd-alloy membrane reactor, merging ammonia cracking and hydrogen separation into a single step, thereby reducing complexity, lowering operating temperature, improving hydrogen recovery and delivering high-purity hydrogen with a smaller footprint and better cost efficiency. • The project will deliver Europe’s first commercial reference plant for H2SITE’s ammonia cracking technology and will thereby demonstrate a replicable model for deployment

				across other European ports and industrial clusters. The project will thus support industrial decarbonisation and strengthen hydrogen import infrastructure.
PLASTIC Plastic Looping to Advance Steam cracker Transition towards Industrial Circularity	Chemicals	Netherlands	PTC Amsterdam B.V.	- The PLASTIC project aims to deploy an integrated chemical-recycling plant in the Netherlands, converting hard-to-recycle plastic waste into high-quality pyrolysis oil. - The project is designed to combine slow-cracking pyrolysis with inline decontamination technologies and produce high-quality PyOil. - The project aims to provide a modular pyrolysis plant model which can be replicated at scale across Europe to support the creation of a liquid market for circular pyrolysis oils and contribute to the Europe's chemical sector's decarbonisation
RE-MET Recycled-Metals with Flexible Modularity	Iron & Steel	Sweden	GREENIRON H2 AB	- The RE-MET project aims to deploy an industrial-scale commercial installation to recover oxidised steelmaking scales residues, producing approximately 53kt/year of hydrogen-direct-reduced metal (H-DRM) for reintegration into steelmaking processes in Norrsundet, Sweden. - The project introduces a breakthrough hydrogen-based reduction route for oxidised scales, using RFNBO-grade hydrogen instead of coke, with a modular, flexible furnace, closed-loop heat-exchanger system increasing thermal efficiency and batch processing enabling operational flexibility. - The project will achieve an absolute avoidance of approximately 1.6 million tonnes of CO2 over ten years with a strong replication potential across 40 sites in Europe, enhancing industrial competitiveness and climate-neutrality.
RE-MENT REinventing ceMENT	Cement & Lime	Latvia	Cemvision AB	- RE-MENT will build and operate a commercial-scale plant in Ventspils, Latvia, to produce up to 500 000 tonnes per year of ultra-low-carbon cement. - The project aims to produce supersulfated Cement (SCC), which has greater strength than some other low-emission cement types and can reduce CO₂ emissions by 93.2 % compared to traditional cement. - The project aims to avoid emissions of over 3.1 million tonnes of CO₂ equivalent over the first ten years of operation. It also aims to enhance EU industrial competitiveness, foster new market uptake and support the Green Deal and Net-Zero Industry Act, while creating valuable jobs and stimulating the local supply chain for construction materials.
ReStore Urban, efficient, scalable carbon capture for waste and recycling	Bioenergy	Sweden	Renova Miljö AB	- The ReStore project aims to demonstrate a first-of-a-kind carbon capture retrofit in a waste treatment facility in the western part of Sweden. - The project pioneers a capture system based on a line level concept using amine-based carbon capture technology. A full-scale unit will be installed on one of the four existing incineration lines, capturing approximately 100,000 tonnes of CO₂ equivalent per year for permanent storage. This will enable net negative emissions while preserving the energy efficiency of the waste treatment plant. - Over a ten-year period, ReStore will reduce roughly 888 000 tonnes of CO₂ equivalent, create green jobs, boost local industry competitiveness and support public acceptance through dedicated education activities, while accelerating CCS uptake across European waste-to-energy facilities.
RIPPLE Dual fuel ammonia propulsion system for clean ammonia transportation	Maritime	Denmark	Ammonia Carriers A/S	- The RIPPLE project will retrofit ocean-going ships that carry ammonia (so-called Very Large Ammonia Carriers or VLACs) with engines that can also use ammonia as fuel for propulsion. These dual fuel ammonia two-stroke engines will be installed on Four VLACs in Denmark. - The project will implement the EU's first dual-fuel ammonia retrofit on a VLAC and will demonstrate the commercial viability of ammonia-fuelled carrier operations. - By running on the fuel they carry, the retrofitted carriers will avoid over 1.2 Mt CO₂e in ten years, bolstering EU industrial competitiveness, creating green jobs and securing the supply of clean ammonia.
Talos Technology for Advanced Long Duration Organic Storage	Intra-day electricity storage	Greece	ANONIMI ETAIRIA DIAXEIRISIS ANANEOSIMON PIGON ENERGEIAS	- The TALOS project will construct a large-scale renewable microgrid on Crete (Greece), coupling solar and wind farms with a 400 MWh solid-flow battery, cutting island electricity-related greenhouse gas emissions by 931,000 tonnes of CO₂ equivalent over ten years. - The integrated battery energy storage system (BESS) and microgrid will provide multi-hour energy shifting and vital grid-stability services for the island's power network. The BESS can charge or discharge at up to 40 MW, giving a total storage capacity of 400 MWh, which means it can deliver

				electricity continuously for roughly 10 hours at its full 40 MW rating. • By displacing diesel generation, TALOS will boost Crete’s energy independence, create local high-skilled jobs and enable surplus renewable electricity to be exported to the national and European grids, supporting regional competitiveness.
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Small scale projects

Name	Sector	Location	Coordinator	Description
ALP-STORE La batterie de nos montagnes	Intra-day electricity storage	France	SOREA SOCIETE DES REGIES DE L'ARC	- ALP-STORE will link an existing high mountain water reservoir with a lower reservoir to provide 3.75 MW of pumped-hydro energy storage and grid injection in the Sétaz massif. - The technical innovation lies in repurposing an operational ski-area water system into a small-scale pumped-hydro storage plant while minimising environmental disturbance in the alpine setting. - By delivering renewable electricity and supporting local water management, ALP-STORE will boost the mountain economy, create jobs, and avoid approximately 46682 tCO₂ over ten years, fostering climate-neutral tourism.
BIOHYGAS Innovative Raw Biogas Reforming for Circular Hydrogen Production	Hydrogen	France	SEV Energies Nouvelles	- The BIOHYGAS project will construct and operate a small-scale decentralised industrial facility at the Lapouyade landfill in Bordeaux, France, to produce 400kg of hydrogen per day from landfill biogas using a methane tri-reforming technology and primarily serving the mobility sector needs. - The innovation of the project lies in an innovative model to produce renewable hydrogen from landfill’s biogas. The project will demonstrate the technical and economic relevance of the model under industrial conditions. - By delivering hydrogen for the use in the mobility sector, the BIOHYGAS project contributes to the EU’s hydrogen market and strengthened competitiveness.
CATREF CATalonia REcycled Fuels	Refineries	XFuel Limited	Spain	- The CATREF project aims at constructing and operating a commercial-scale plant for conversion of marine oily waste and oil-containing residues into specification-grade recycled Marine Gas Oil (MGO) using a proprietary Chemical Liquid Refining (CLR) waste-to-fuel conversion technology in Spain. - The main innovation of the project lies in the deployment of a first-of-a-kind reference plant using of XFuel’s proprietary Chemical Liquid Refining (CLR) technology. It will produce a drop-in fuel that is designed to meet ISO 8217 that requires no modification to vessels or fuelling infrastructure. - The project is expected to achieve 92.18% GHG savings and is backed by signed offtake agreements covering about 84,000 tonnes per year. It demonstrates a modular, capital-efficient model that can be replicated near major ports across Europe and globally.
ComPon Prague ComPon (Community Energy Ponton) - a heating and cooling generation plant on a floating platform, connected to local district heating and cooling system	Hydro/Ocean energy	Czechia	ComPon Praha a.s.	- ComPon will install a floating thermal energy platform in Prague, supplying heat and cooling to the city’s district heating and cooling (DHC) network. - The project will be constructed in a shipyard and connected to the local DHC. - Its solution can be connected to any local district heating in Europe and establishes district heating and/or district cooling system as a new source and/or as replacement of fossil-based source.
CouplHyNG Innovative integration of biological methanation and electrolysis to produce renewable e-methane from the flexible integration of biogenic CO ₂ on an agricultural site	Refineries	France	ENOSIS	- The CouplHyNG project aims to integrate a biological methanation unit into an existing agricultural biogas plant, in France, converting biogas into e-methane and biomethane. - The project will implement a first of a kind commercial-scale biological methanation process combined with renewable hydrogen produced on-site via electrolysis. The system’s flexibility loop enables dynamic operation and e-methane production according to electricity price and demand. - The project raises renewable gas injection into the grid by approximately 57% without requiring additional biomass, and its modular design ensures high replicability across Europe where more than 18,000 biogas plants and wastewater treatment facilities offer immediate deployment potential.
ECOSTRUCT PANELS ECOSTRUCT PANELS	Buildings	Netherlands	RC PANELS BV	- The ECOSTRUCT PANELS project will develop a next-generation prefabricated façade system combining high thermal performance and fire resistance while reducing the material use. - The project will implement a simplified, customised light-weight design applying a file-to-factory approach that will also enable rapid installation and mass customisation. - The project is expected to cut lifecycle GHG emissions by up to 77.86% over 10 years compared with conventional façade construction, driven by lower embodied carbon, less construction waste and improved energy performance It will strengthen local and regional economies by expanding off-site manufacturing, creating skilled jobs in digital manufacturing and engineering.
EuniFlex VPP	Intra-day	Cyprus	Eunice Wind Park	EuniFlex VPP will demonstrate on Cyprus the first commercial

EUNICE Flexible Virtual Power Platform	electricity storage		Holdings (Int) LTD	deployment of DC-coupled ultra-fast bidirectional chargers and battery systems on a non-interconnected island. - The project integrates cutting-edge lithium-iron-phosphate (LFP) batteries with a vehicle to grid (V2G) cluster and ultra-fast DC chargers. - It will deploy energy storage solutions to reduce curtailment that can be replicated on national and EU Level.
E-Mix Electrically heated hot asphalt Mix	Glass, ceramics & and construction materials	France, Germany	COLAS	- The E-Mix project aims to decarbonise asphalt production by retrofitting an existing hot-mix asphalt plant in France, replacing the fossil-fuel gas burners with an electrified heat supply to enable low-carbon asphalt production. - The project introduces a novel solution for the asphalt production based on the electrification of heat supply, which includes the replacement of the conventional gas burners with an electric heating and high-temperature thermal storage to produce the hot air required for asphalt manufacturing. - By eliminating on-site fossil-fuel combustion, the E-Mix project significantly reduces direct CO₂ emissions and creates a replicable technology solution for other high-temperature processes.
KI-ZERO Kirchdorf Integrated near Zero-Emission cement production and caRbon dioxide stOrage value chain	Cement & Lime	Austria	Kirchdorfer Zementwerk Hofmann GmbH	- The KI-ZERO project will demonstrate an integrated on-shore CCS value chain at a cement plant in Austria, capturing and permanently storing over 9,100 tonnes of CO₂ annually from clinker production. - It will use amine-based post-combustion capture combined with on-site CO₂ liquefaction, waste-heat-recovered solvent regeneration and e-truck CO₂ transportation to geological storage in a nearby depleted gas field. - By proving a regionally replicable CCS model, the KI-ZERO project will lower energy costs for cement producers and deliver commercial and operational data supporting Europe's transition to low-carbon cement.
MOBIUS Mobile Battery Valorisation to Enable Zero-Emission Large-Scale Construction	Use of renewable energy outside Annex I	Belgium	Aertssen Group NV	- The MOBIUS project will pioneer a dual-use mobile battery system in Belgium that powers zero-emission heavy machinery on off-grid construction sites and, when idle, provides grid ancillary services and supports on-site renewable generation. - By stacking these revenue streams, the project transforms high-CAPEX mobile batteries into economically productive assets. The revenues from ancillary services can fully offset the levelised cost of mobile storage and transport, effectively reducing the landed cost of renewable electricity at construction sites. - The MOBIUS project's solution will close the cost gap between diesel and zero-emission equipment, cutting CO₂ emissions, boosting the competitiveness of European construction firms and creating new market opportunities for clean-energy services.
FIN-SWE-EC FIN-SWE Electric Corridor: ElectElectric RoPax transport corridor between Finland and Sweden demonstrating large-scale battery deployment with hybrid propulsion and optimised energy management system	Maritime	Finland, Sweden	FINNLINES OYJ	- The FIN-SWE-EC project aims to retrofit two battery-ready RoPax vessels, Finnsirius and Finncanopus, operating on the Naantali–Kapellskär corridor between Finland and Sweden. The project will upgrade each vessel with an additional 25 MWh Battery Energy Storage System (BESS), increasing the total installed battery capacity to approximately 30 MWh per vessel. - The key innovation of the project lies in the deployment of very large-scale battery hybridisation on a long, year-round Baltic route, which introduces advanced energy-management across propulsion, hotel load and thermal systems, overcoming shore-side charging constraints, grid capacity needed to deliver that power during short port turnarounds. - Following retrofits in 2028–2029, commercial operation will begin in January 2030. The project is expected to avoid about 36,000 t CO₂e per year (363,000 t over 10 years), a reduction of about 55% compared with fossil-fuel operation, and to provide a replicable template for electrifying RoPax services across Europe.
H2-TIDAL Green Hydrogen Production for Transport, Industry, and Decarbonization Acceleration in Latvia	Hydrogen	Latvia	AKCIJU SABIEDRIBA LATVENERGO	- The H2-TIDAL project will build and demonstrate a 2 MW ceramic-based high-pressure alkaline electrolyser (CBAE) system for renewable hydrogen production, storage and distribution in for transport sector and other industrial users. - The core technical innovation of the project is a ceramic-based high-pressure alkaline electrolyser. - The facility will accelerate Latvia's decarbonisation through the avoidance of approximately 16,144 tonnes of greenhouse gas emissions over the first ten years of operation, validate the CBAE system at industrial scale demonstrating its reliability and readiness for replication and

				wider deployment in the EU.
ReACT Recovery and Energy Activation via Converted Thermal energy	Chemicals	Belgium	Cargen Group	- The ReACT project aims to establish a full-scale, circular facility that reactivates saturated activated carbon (SAC) for repeated reuse in industrial air, biogas and water purification in Port of Antwerp-Bruges, Belgium. By integrating intake, classification, reactivation and reuse into a single managed loop it reduces waste, limits the need for virgin AC and ensures safe destruction of contaminants, including PFAS. - The reactivation is embedded as a lifecycle function directly coupled to service-based filtration, though hybrid high-temperature electric-gas operation, systematic feedstock analysis and blending and the controlled use of biochar to compensate unavoidable carbon losses. This results in lower lifecycle emissions and higher operational flexibility. - The ReACT project creates 22 full-time jobs in operations, maintenance and environmental management and enhancing competitiveness by providing a scalable solution for replication across Europe.
REFINIS-CRM Refinis Circular Recovery of Critical Raw Materials	Non-ferrous metals	Lithuania	Refinis UAB	- REFINIS-CRM project aims to build and operate a fully integrated secondary Platinum Group Metals (PGM) recycling and refining plant, in Lithuania, converting end-of-life waste into high-purity platinum, palladium and rhodium for the European market. - The facility is designed to combine direct-current plasma smelting, a top-blown rotary converter upgrade and molecular recognition technology hydrometallurgical refining in a continuous process. - By supplying approximately 8.21 tonnes per year of high purity PGMs, the project aims to support the European industry competitiveness in clean-technology sectors.
RETRO-EMT Retrofitting Environmental-friendly Technologies to Reduce Operational Emissions for Maritime Transport	Maritime	Netherlands	Holland Maas Scheepvaart Beheer VII B.V	- The RETRO-EMT project aims to demonstrate the technical and operational feasibility of decarbonising existing short sea container vessels through a fully integrated retrofit of the existing in-service containership feeder combining onboard carbon capture and storage (OCCS), wind assisted propulsion (WAP), hydrodynamic optimisations, and energy efficiency measures into a single, coherent solution. The modifications will be done at a shipyard in Antwerp, Belgium. - A key innovation of the project is the use of lime-based onboard carbon capture, which enables safe onboard handling without liquefaction, supports circular reuse of materials, and allows controlled ship-to-shore CO2 handling. Wind-assisted propulsion and hydrodynamic measures improve propulsive efficiency, while energy-efficiency measures reduce auxiliary demand, resulting in a fuel consumption reduction of over 26%. - The project will avoid around 94,500 tonnes CO₂ over its first ten years of operation while reducing fuel use by over 26 %, extending existing assets service to 2039 and providing a replicable pathway for European short-sea shipping.
SCRAP Smart Circular Recovery through AI-assisted & advanced Processing	Non-ferrous metals	Netherlands	Myne Circular Metals BV	- The SCRAP project aims to establish an integrated recycling platform in The Netherlands that processes complex non-ferrous scrap streams, to recover high-purity aluminium, brass and copper. - By pairing AI-driven alloy sorting with Magnetic Density Separation for fine particles, the project can produce specification-compliant aluminium, brass and copper at industrial scale, suitable to replace virgin materials in demanding applications. - The project aims to reduce EU reliance on imports, lower carbon emissions and create high-value jobs in the recycling sector by supplying high purity secondary aluminium, brass and copper.
STEAMBOX Sustainable Thermal Energy Application for Manufacturing BOXes	Pulp & Paper	France	SMURFIT WESTROCK FRANCE	- The STEAMBOX project aims to install and operate a high-temperature thermal-energy-storage system that uses low-carbon electricity-generated heat for corrugated-packaging production in Vernon, France. - The project will combine a solid-state high-temperature thermal storage system with industrial resistive heating, that will enable the generation of steam from electricity on-demand. - STEAMBOX creates a scalable model for the pulp-and-paper sector, enhances the competitiveness and supports jobs across Europe’s low-carbon industrial transition and will avoid approximately 17,000 tonnes of CO2 emissions of 10 years.
SVAROG	Non-ferrous metals	Bulgaria	SOFIA MED	The SVAROG project will build and operate a large-scale industrial copper recycling plant in Sofia,

SVAROG - Next-Generation Copper Recycling Hub				converting low-grade, heterogeneous into high-purity copper (>99.9 %) and a copper nickel alloy. • The project will introduce an innovative recycling architecture that will feed into an existing pyrometallurgical foundry, substituting a significant share of virgin copper cathodes. • This process will enable the plant to avoid approximately 1.16 million tCO₂e over ten years, , reduce EU import reliance and boost the circular economy and industrial competitiveness.
TERRA-Q Pioneering Sustainable Eco-friendly Tile Production	Glass, ceramics & and construction materials	Romania	Calamearic SRL	• The TERRA-Q project aims to establish an industrial-scale plant in Romania to produce low-carbon, circular mineral tiles, replacing the conventional ceramic firing process (1200-1400 °C) with a low-temperature manufacturing route... • The core technical innovation is a fully electrified integrated circular production model that incorporates the re-use of high shares of mineral and secondary materials eliminating the kiln firing process. • By cutting GHG emissions by about 80 % and avoiding roughly 33,000 tonnes of CO₂ emission over ten years, TERRA-Q combines technological innovation with commercial viability. The project contributes directly to EU objectives on climate neutrality, circular economy, and industrial transformation.
TISSUE Thermal Industrial Storage System for Utility Electrification	Pulp & paper	France	Epyr	• The TISSUE project aims to deploy a high-temperature thermal energy storage unit in a tissue mill for drying and pulping process, providing heat via renewable electricity-powered resistive heating. • The project is designed to use renewable-powered electric resistive heating to charge a refractory ceramic core and discharges high-pressure steam through a fire-tube boiler. Alongside the heat supply, a second revenue stream will be generated through the participation in the automatic frequency restoration reserve (aFRR) market. • It delivers an integrated, plug and play and replicable unit centralizing electricity reception, transformation into heat, storage and discharge, simplifying deployment with no modification to existing process. Implemented as Heat-as-a-Service model, the thermal storage system can cover up to 65 % of the site’s thermal demand, avoiding around 3,950 tCO₂eq per year.

Pilots project

Name	Sector	Location	Coordinator	Description
AEGEANFLOAT Aegean Breakthrough Floating Wind Pilot	Wind energy	Greece	TERNA ENERGY AE	- AEGEANFLOAT will deploy a 45 MW floating offshore wind farm in the Aegean Sea. This project will include pilot-scale site characterisation, concrete platform design, installation, grid connection and operation of three 15 MW turbines. - The Swinging Around Twin Hulls (SATH) concrete-based floating platforms coupled with a single-point mooring system will provide enhanced stability, optimal wind-wave alignment and reduced structural loads for deep-water turbines where fixed-bottom technologies are not viable. - The activities will de-risk floating offshore technology at pre-commercial scale, collect technical, environmental and economic data that could accelerate permitting, boost the European supply chain, and support Mediterranean energy security and climate-neutrality.
Eagle Eagle	Chemicals	Finland	NG Nordic Finland Oy	- Eagle aims to demonstrate a fully integrated carbon capture and utilisation process at NG Nordic Finland’s waste-to-energy plant, capturing around 10 kt CO₂ annually from flue gases and synthesizing it together with renewable hydrogen into novel Polyhydroxyalkanoates (PHA) based polymers. - The project deploys a proprietary technology, including a novel multi-reactor system, to polymerise continuously into a two-step fermentation process VFAs into tailor-made polyhydroxyalkanoates (PHA) pellets. - By turning captured CO₂ into high-performance bio-based polymers, Eagle aims to avoid around 2.67 Mt CO₂eq over ten years.
ELSA A patented electrochemical process for Soda Ash production	Chemicals	Spain	SOLVAY QUIMICA SL	- The ELSA project aims to validate at industrial pilot scale, an innovative electrochemical process for soda ash production. - The project is designed to deploy the patented electrochemical process powered by renewable electricity coupled with a carbonation process sourced with biogenic CO₂. - The ELSA project is set to reinforce the European soda-ash competitiveness, while safeguarding strategic production locally as well as supporting downstream industries such as glass and chemicals.
Euro Dragon Farm Euro Dragon Farm - Development of a first-of-its-kind array of 10 tidal devices rated 5 MW	Hydro/ Ocean energy	Ireland	MINESTO AB	- Euro Dragon Farm aims to demonstrate a cost-efficient, lightweight tidal array in Irish coastal waters, delivering up to 10 MW of predictable renewable electricity to the grid. - The project deploys a first-of-its-kind technology tailored to low-velocity tidal currents, using a low-material-intensity design and detailed hydrodynamic modelling. - The project will create local supply-chains and skills development and provide a replicable and exportable solution that strengthens Europe’s long-term energy security and resilience.
Furu Project Furu: Europe's Reference Case for Modular DACCS	Other	Norway	SIRONA TECHNOLOGIES NORWAY AS	- The project Furu will operate a pilot-scale Direct Air Carbon Capture with permanent Storage (DACCS) plant in Øygarden, Norway, powered by renewable electricity and linked to the Northern Lights geological storage, removing around 4 000 tonnes of CO₂ per year. - The project deploys a solid-sorbent Temperature-Vacuum Swing Adsorption (TVSA) technology in a modular containerised architecture. The innovations also include sorbent-flexible reactors compatible with future sorbent generations and a two-stage heat pump. - The project has proven demand and is designed for eligibility under the EU Carbon Removals and Carbon Farming Regulation (CRCF). In addition, Furu advances the technological state of the art, lowers the technical risk of scaling to larger plants, and makes the architecture replicable across European industrial sites with renewable power and CO₂ storage access.
FuElySER Fuel cell and Electrolyser Systems for European Resilience	Hydrogen	Germany	REVERION GMBH	- The FuElySER project aims to develop a reversible solid oxide (rSOC) 8 MWe fuel cell and 24 MWe electrolyser plant for the production of renewable hydrogen for industrial off-takers and dispatchable low-carbon electricity generation using hydrogen and biomethane in Lingen, Germany. - Using a novel centralised balance-of-plant architecture, the plant automatically switches between fuel-cell mode (converting biomethane to dispatchable bioelectricity reaching up to 80 % electrical efficiency) and electrolysis mode (producing renewable hydrogen from grid electricity) on real-time market signals. - The FuElySER project validates the technology at utility scale, generating the operational data required for replicated commercial deployment and so contribute to industrial decarbonisation in the EU. The project itself over ten years of operation will ensure avoiding more than 400 kt CO₂-eq.
HyScore Revolutionising Green Hydrogen Production with game-changing technologies	Hydrogen	Germany	RWE GENERATION SE	- The HyScore project will build and operate a 20 MW renewable-hydrogen demonstration plant, using existing power, water-treatment and hydrogen-logistics infrastructure to produce around 43 000 tonnes of green hydrogen over a 20-year duration. - The project will showcase next-generation capillary-fed electrolysis combined with electrochemical compression and purification, packaged in a modular, containerised design with dry cooling to reduce water use, energy losses, and construction complexity. - By delivering up to 43 000 tonnes of renewable hydrogen for the 20-year project lifetime and avoiding more than 130 kt CO₂-eq for the first 10 years of operation, the HyScore project will provide a replicable solution and so contribute to industrial decarbonisation.

METHANOL.ONE First-of-a-kind demonstration plant for the production of low-carbon renewable methanol powered by homogeneous catalysis	Refineries	Germany	C1 Green Chemicals AG	• The METHANOL.ONE project aims to design, build and operate a novel demonstration plant at the Chemiepark in Leuna, converting biomethane into green methanol at industrial scale. • The project introduces an ultra-selective homogeneous catalysis process for methanol synthesis, aimed to deliver higher conversion efficiency and feedstock flexibility than conventional fossil-based routes. • The METHANOL.ONE project aims to avoid around 318 ktCO2-eq over ten years and aims to enable rapid deployment of the technology across Europe, boosting competitiveness and delivering large-scale decarbonisation of fuels and chemicals, essential for climate-neutral value chains.
LOGILIFT European innovative environmentally friendly LOGistlcs transport solution for heavy LIFTing	Aviation	France	FLYING WHALES	• The project LOGILIFT aims to complete the certification, development and prepare the industrial ramp-up and deployment of a low-emission heavy-lift hybrid-electric cargo airship (LCA60T) that is able to transport point-to-point payloads up to 60 tonnes. • The main technical innovations of the project are its large-capacity lift and hybrid-electric propulsion to create the first-of-a-kind 60-tonne large capacity cargo airship. • The project would generate over 2,000 high-skill jobs, strengthen European supply-chain resilience and sovereignty, and support climate-neutrality targets.
NetZeroHeat First European SMR to unlock Net Zero city heat at scale	Other	France	Calogena	• NetZeroHeat will operate Europe’s first nuclear heat-only Small Modular Reactor (SMR), delivering 131 GWh per year of low-carbon heat to the Pierrelatte district-heating network in France. • The pilot employs a 30 MWh module, the CAL30, a compact factory-built SMR featuring low-pressure, passive cooling and patented safety systems, which enables safe near-urban deployment. • By avoiding over 221,000 tonnes of CO2e in its first decade, NetZeroHeat demonstrates a scalable, European-sourced solution that strengthens industrial competitiveness, and supports the EU’s climate-neutral heating transition.
OffshoreCharge OFFSHORE wind power to CHARGE zero-emission vessels	Maritime	Denmark	STILLSTROM AS	• The project OffshoreCharge aims at integrating and installing the first commercial Stillstrom Offshore eCharger (SOeC), enabling fully electric Service Operation Vessels (eSOVs) to charge safely at offshore wind farms. • The project employs a first-of-a-kind 7.5 MVA offshore charger using components from proven suppliers and designed for safe, reliable, independently qualified operation. • Each SOeC unit could save more than 5.5 tonnes of CO2-eq equivalent annually, cut fuel costs, strengthen offshore wind logistics and open new markets.
Project SCALA Sustainable Carbon Capture And Low-energy Adsorption for Industrial Decarbonisation and Carbon Removal	Bioenergy	France	MOF TECHNOLOGIES LIMITED	• The project SCALA will design, construct and operate a first-of-a-kind fully electrified MOF-VPsA carbon-capture plant, integrated at the KOGEBAN biomass CHP unit in Nesle, France. • The project employs a proprietary MOF-VPsA technology and will advance its TRL from 6 to 7-8 under real operating conditions. The capture technology operates without steam extraction and thermal regeneration, enabling retrofit of biomass CHP plants. • The plant will avoid close to 54,000 tonnes of CO2e over ten years, stimulating the regional low-carbon market and providing a replicable, cost-efficient BECCS model for Europe.
ReGAIN Pilot Re-usable Germanium substrates: Advancing European Independence Pilot	Non-ferrous metals	Belgium	UMICORE SA	• ReGAIN will establish a first-of-a-kind pilot production line for foils used in the manufacturing of high-performance solar cells, reducing germanium requirements while maintaining high levels of performance and durability. • The project will replace today’s single-use germanium wafer production with an advanced circular process. Each wafer can be reused multiple times, which also reduces the need for newly extracted and refined raw material. • By avoiding nearly 60 kt CO2-eq over ten years, the project will contribute to European strategic autonomy and secure resilient supply chains for space and advanced photovoltaics.
REACT Recovery and Energy Activation via Converted Thermal energy	Other	Belgium	CALORITUM NV	• The REACT project aims to install an innovative chemical Heat Transformer (QHT) at TotalEnergies Refinery in Antwerp, to convert waste heat into medium-pressure steam for industrial use, using a physicochemical reaction. • The project will scale up the patented low-energy technology, to an industrial 5MW capacity, operating with low electricity use and operating costs. • The project aims to avoid more than 66 kt CO2-eq over ten years delivering low carbon steam and providing a replicable and scalable, low-maintenance solution, enhancing long-term operational resilience and reducing dependency on volatile energy markets
Seatron The world’s largest battery-electric container vessel retrofit powered by a novel Marine Battery Container	Maritime	Germany	A.P. MOLLER – MAERSK AS	• The project SEATRON will retrofit an existing 3,500-Twenty-Foot Equivalent (TEU) container vessel into a battery-electric ship operating on the Bremerhaven–Hamburg–Gothenburg route. • The project will demonstrate the first large-scale battery-electric retrofit of a commercial container vessel. The solution combines several innovative elements, including a modular Marine Battery Container (MBC) system providing high-energy-density, swappable battery storage, a high-power DC-based propulsion and energy management architecture, and the integration of Onshore Power Supply (OPS) infrastructure enabling high-capacity battery charging during port calls. • The project is expected to achieve near-zero operational emissions and support the scale up of battery electric container shipping in the EU.

VICTORIA Integrated CO ₂ Valorisation Process for On-Site e-Methanol Production - Enhancing Circularity of Wastewater Treatment Plants and Enabling Maritime Sector Decarbonisation	Refineries	Spain	ICODOS GMBH	• The project VICTORIA will build an integrated RFNBO e-methanol plant at the Copero wastewater-treatment facility in Seville. The plant will integrate biogenic CO₂ capture using methanol solvent, hydrogen from a 10MW electrolyser, and methanol synthesis and produce around 3,800 tonnes of e-methanol per year. • The main innovation of the project lies in the carbon-capture and conversion system, which aims to validate a modular and replicable pathway for decentralised e-fuel production from biogenic CO₂ sources such as wastewater treatment plants. • By producing more than 35 kt of e-methanol, preventing the direct venting of more than 48 kt CO₂-eq and generating around 53.5 kt of oxygen in the first 10 years of its operation, VICTORIA will showcase a replicable pathway for decentralised e-fuel production from biogenic CO₂ sources, thus supporting maritime decarbonisation and industrial emissions reduction.

Manufacturing projects

Name	Sector	Location	Coordinator	Description
ArisEU Advanced Resilient Integrated Supply for EV Battery in EU	Road transport	Poland	LG ENERGY SOLUTION WROCLAW SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA*LG ENERGY SOLUTION WROCLAW LIMITED LIABILITY COMPANY	• The ArisEU project will build and commission a 9 GWh per year Lithium Ferro Phosphate (LFP) battery-cell manufacturing line in Poland, delivering cells for European electric vehicles. • The project introduces advanced stacking, proprietary connection and accelerated-formation technology in a digitally-governed manufacturing line. The novel prismatic battery cell architecture will streamline industrialisation. • ArisEU will boost EU industrial competitiveness, enhance supply-chain resilience and accelerate affordable EV uptake and result in 2.9 million tCO₂e emission avoidance over its first ten years of operation.
FLOW4EVE Scaling a heat pump centered Mobility Core System, boosting EV Battery Performance	Road transport	Hungary, Romania	ROBERT BOSCH GMBH	• The Flow4EVE project will industrialise a heat-pump-centred Mobility Core System that enhances battery performance and supports energy storage applications that can extend winter driving ranges for Battery electric vehicles by up to 20 % and enables better battery capacity tailoring across a wider temperature range. • The system uses a modular heat-pump architecture that simplifies integration, allows flexible battery-capacity optimisation and supports energy storage applications like Vehicle2Home/Grid. • By establishing a predominantly EU-based value chain, the project will create jobs, strengthen the strategic automotive sector and save around 3 million tCO₂eq in the first ten years of operation.
GAUSS GAUSS - Green Assets for European Union Strategic Supply	Road transport	Estonia	Neo Performance Materials	• The GAUSS project will build a fully integrated, production line for rare-earth permanent magnets in Estonia, including separation, metallisation and magnet manufacturing to deliver up to 3,000 tonnes of permanent magnets per year, one third of which is allocated to EU off-shore wind farms. • The innovation lies in a closed-loop solvent-extraction process that replaces conventional nitrate routes, while reducing energy consumption. It integrates a three-stage value chain within a single industrial ecosystem. • By securing EU supply of rare earth permanent magnets, GAUSS contributes to industrial resilience, creates high-skill jobs, supports several clean-tech sectors and will avoid over 3.4 million tCO₂eq over its first ten years of operation, delivering on the Critical Raw Materials Act and Net-Zero Industry Act.
HyBoost Large-scale Production of Heat Exchangers for Solid Oxide Systems	Manufacturing of components for Energy Intensive Industries	Belgium	BOSAL EMISSION CONTROL SYSTEMS NV	• The HyBoost project will build and operate a commercial, industrial-scale plant for producing advanced heat exchangers and interconnect plates tailored for high-temperature Solid-Oxide Electrolysis Cells (SOEC) technologies. • The project accelerate scale-up of reversible SOEC technology by scaling up pilot production lines to the EU’s first-of-a-kind commercialisation of an industrial-scale manufacturing facility for Solid Oxide Cells (SOC). • HyBoost will avoiding about 1.9 million tCO₂eq over its ten first years of operation, and reinforce Europe’s hydrogen supply chain, boost competitiveness, energy security and sustainability.
KONCAR-NEXUS KONCAR Smart Power Interface for Next Generation DC Systems	Manufacturing of components for Energy Intensive Industries	Croatia	KONCAR Inc.	• The KONCAR-NEXUS project will industrialise a modular 2.5 MW medium-voltage-to-DC platform, to connect standard medium-voltage grids with large DC loads such as green hydrogen electrolyser, in Croatia. • The innovative power conversion platform replaces traditional switchgear, transformer, rectifier and filter assemblies with a single solid-state unit resulting in lower losses, reduced climate footprint and faster installation by improving the grid interface for electrolyser, PV and BESS. • The project will establish a new production line and upgraded engineering-testing facilities in Zagreb, stimulating local supply-chain activity in advanced DC power infrastructure for renewable hydrogen and clean-energy markets.
OrbitalHPM-2026 Orbital Heat Pump Module: Scaling a Smart Water-Reuse System to Reduce Household Energy Use, Water Consumption, and Emissions	Manufacturing of components for renewable energy	Sweden	ORBITAL SYSTEMS AB	• The ORBITAL SYSTEMS project will scale up the manufacturing of the Orbital Heat Pump Module (OHPM), an innovative clean-tech solution that drastically reduces energy and water consumption in domestic hot water systems. • The project will introduce a new, semi-automated production lines, enhance the product efficiency by replacing machined parts with injection- and blow-moulded components, deploying digital manufacturing-execution systems and in-line quality control. These optimisation together lead to 50% lower costs of production, supporting large-scale market deployment. • The OHPM will cut the energy needed to warm water for a shower in a household by 85 % and enable 90 % water reuse, lowering household bills and climate footprint, and avoid approximately 144,950 tonnes of CO₂ emissions over its lifetime.
PowerCo Spain First European large-scale	Road transport	Spain	PowerCo Battery Spain S.A.U.	• The PowerCo Spain project will build an industrial-scale, net-zero gigafactory in Spain, producing up to 27 GWh per year of high-density prismatic lithium iron phosphate battery cells for electric vehicles. • It will deploy a modular, fully electrified battery manufacturing plant with

automotive LFP battery cell gigafactory driving Europe's shift toward clean, affordable, and resilient electric mobility				two blocks and eight production lines, powered by renewable electricity. The factory will produce a unified battery cell architecture to ensure standardisation, digitalised resource efficiency and flexible scaling. • The project will contribute to diversify Europe's battery supply chain, reduce reliance on imported battery cells outside the EU and strengthen domestic clean-tech manufacturing capacity.
PUMPEDGE PUMPEDGE - Pioneering Edge Heat Pump Technology Project	Manufacturing of components for renewable energy	Hungary	CAADEx KFT	• Project PUMPEDGE will design, build and commercialise a set of five industrial heat pumps in the 20 to 100 kW range, delivering scalable, high-efficiency heating for industries across the EU. • The core innovation is a novel thermally conductive contact material that reduces performance degradation, boosting overall energy efficiency by around 30 % over a ten-year lifecycle. • The project will cut industrial CO2 emissions with approximately 242,000 tonnes its first ten years of operation and enhance Europe's competitiveness in clean-energy technologies.
RESOLVE Resilient Supply chain for offshore wind and low carbon energy	Manufacturing of components for renewable energy	Norway	Aker Solutions AS	• Project RESOLVE will set up a first-of-its-kind automated pre-fabrication line in Norway to produce steel structures for offshore wind substations, enabling efficient long-distance transmission and the integration of far-from-shore wind resources. • The facility will manufacture 2 GW high-voltage direct current (HVDC) topsides using automated laser-hybrid arc welding that will substantially shorten delivery times. • The project shortens delivery times for HVDCs by approximately 10 months, reduces reliance on non-EU suppliers and supports the development of a robust regional supply chain.
SOLAR4EU Cutting-edge technology for large scale Solar manufacturing in Europ	Manufacturing of components for renewable energy	France	HOLOSOLIS SAS	• The SOLAR4EU project will establish a 5 GW solar-cells and modules integrated factory in Hambach, France. • It will manufacture cutting-edge N-Type TOPCon technology in a data-driven, highly automated production line, delivering energy-efficient photovoltaic modules. • The factory will create over 2000 jobs, reinforce the European solar value chain and reduce import reliance on solar PVs outside the EU and contribute to long-term industrial competitiveness in the EU PV sector.
SPRINTER SolydEra Plant of Reversible Industrial Technology for European Resilience	Manufacturing of components for renewable energy	Italy	SOLYDERA SPA	• The SPRINTER project aims to expand and upgrade the existing pilot Solid Oxide Fuel Cells (SOFC) and Solid Oxide Electrolysis Cells (SOEC) stack manufacturing facility, for the production of the next generation reversible solid oxide cell (rSOC) stacks, and to manufacture power and electrolyser modular systems. The aim is to expand installed stack manufacturing capacity from 8 MW/year to 50 MW/year in SOFC (150 MW/year SOEC equivalent). • The reversible SOC stack integrates performance-critical Balance-of-Plant components into modular products, reduces integration complexity and enables both high-efficiency power generation and hydrogen electrolysis. • The project will reinforce Europe's net-zero manufacturing base, strengthen supply-chain resilience and accelerate the rollout of clean power and green hydrogen.
TITAN Ultra-High-Efficiency Magnet-Free Induction Motor Manufacturing	Manufacturing of components for renewable energy	Germany	ADDITIVE DRIVES GMBH	• Project TITAN will establish a large-scale automated EU manufacturing line for the production of ultra-high-efficiency, magnet-free electric motors for heat-pump applications. The project will manufacture 80 000 such motors per year. • The project will develop an advanced induction-motor architecture with over 96% efficiency without rare-earth magnets, using an innovative loss-minimising design, improved thermal management and extended service life. • The project will create new high-skilled jobs, reduce supply-chain dependence outside the EU and support regional economic development.